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Volume 5 THE MONTHLY NEWSLETTER FOR ENERGY MANAGERS AND PUBLIC AFFAIRS OFFICERS Issue 1

Message To Energy Managers:

As we enter the year 2000, let's

- Reflect on the significant accomplishments the DON Energy Program has to be proud of, including the remarkable FY 98 achievements of SECNAV award winner Norfolk Naval Shipyard; and
- Get a glimpse of trends and exciting opportunities ahead, as seen through the eyes of visionaries Paul Hawken, Amory Lovins, and L. Hunter Lovins—as we move toward the next industrial revolution.

Check out two helpful tools designed to assist you in charting your course in the future energy environment: a new DOD handbook to facilitate estimating energy and water consumption, and an online simulation game that will sharpen your skills to compete under the emerging electricity deregulation.

Let's make 2000 a year to remember!

Sincerely,

Bill Tayler

William F. Tayler
Navy Shore Energy
Program Manager

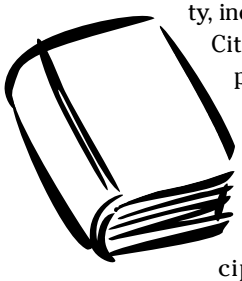
1999 IN REVIEW: Energy Program Shines

- The National Oceanic and Atmospheric Administration projects 1999 to be the second warmest year on record in the U.S., following 1998's record high. Cooler ocean conditions in 1999 associated with La Niña helped to ameliorate what might otherwise have been an even warmer year.
- President Clinton issues Executive Order 13123 mandating a 35% cut in energy usage by 2010, and a 30% reduction in greenhouse gas emissions between 1990 and 2010.
- Under SECNAVINST 4100, SECNAV establishes a high-level DON Energy Policy Board to lead shore energy efficiency progress.
- Eight Commands win SECNAV energy awards. Four DON Commands win DOE Federal Energy Management Program (FEMP) awards.
- Six DON personnel are named FEMP Energy Champions.
- The DON Energy Program centrally funds $19.7M in energy projects that will yield $6.8M in annual savings when completed.
- A new Bachelor Enlisted Quarters complex is completed at Great Lakes Naval Training Center (NTC) using sustainable design principles, and is assured a Bronze medal, and potentially a Silver Medal rating by the U.S. Green Building Council's LEED Building Rating System. The final design reflects a projected energy use of 179.77 kW/m²/year-a 6% savings.
- The new NAVFAC headquarters at the Washington Navy Yard, renovated last year using sustainable design principles, is selected winner of the 1999 Commanders Award for Design Excellence.
- The DON Energy Program provides $8M in financial incentives to reduce repayment terms for claimants signing DSM and ESPC contracts. These contracts will provide $78.6M in new equipment and services paid for out of energy savings produced, and will yield $12.4M in annual savings once the contractors re-coup their investment.
- NSA MIDSOUTH in Memphis, Tennessee, signs a delivery order under a Basic Ordering Agreement with Memphis Light, Gas, and Water to implement a $12 million energy conservation project that will return $1.7M in savings annually.
- The U.S. Naval Academy in Annapolis signs an Energy Savings Performance Contract (ESPC) valued at $20 million. Portsmouth Naval Shipyard, utilizing an Army Corps of Engineers Regional ESPC, signs the first task order valued at $10.9 million.
- PWC Jacksonville signs a delivery order under a Basic Ordering Agreement with TECO Peoples Gas System to implement a $12.6 million energy conservation project at the Naval Air Station Jacksonville.
- Navy Whidbey Recycle, an NAS Whidbey Island project achieving a 60% waste stream recycling rate, wins a Sustainability Award at the National Town Meeting for a Sustainable America.
- One thousand one hundred sixty-nine boxes of energy awareness promotional materials weighing 17.4 tons are mailed to DON shore energy managers worldwide to support Energy Awareness Week events.

DON Energy Awareness Website: Access the tools on the Navy Energy website for ideas, planning tips, and tools. Set your browser to **http://energy.navy.mil** and scroll down the left-hand column to the Awareness pick.

Where are we heading in the new Millennium?

Three leading energy and business visionaries, Paul Hawken, Amory Lovins, and L. Hunter Lovins, give us a glimpse in their newly released book NATURAL CAPITALISM: CREATING THE NEXT INDUSTRIAL REVOLUTION. Natural capital refers to the natural resources and ecosystem services that make possible all economic activity, indeed all life.



Citing hundreds of compelling stories from a wide array of sectors, NATURAL CAPITALISM demonstrates early innovators adopting natural capitalism's four interlinked principles:

1) increased resource productivity;
2) redesigning industry on biological models with closed loops and zero waste;
3) shifting from the sale of goods (for example, light bulbs) to the provision of services (illumination); and
4) reinvesting in the natural capital that is the basis of future prosperity.

The authors believe a resource productivity revolution is emerging. The economy is shifting from an emphasis on human productivity to a radical increase in resource productivity. This shift offers hope for more meaningful family-wage jobs, a better worldwide standard of living to those in need, and a dramatic reduction of humankind's impact on the environment.

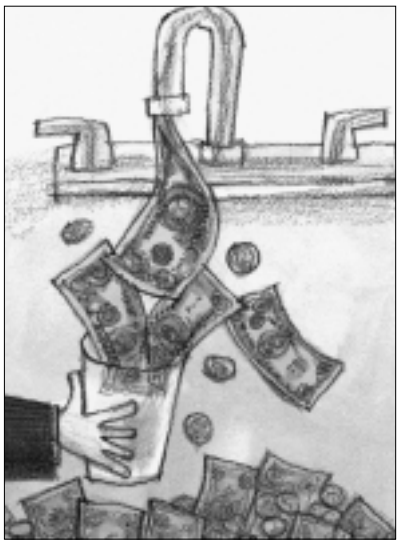
Chapter 2, on Hypercars and neighborhoods, and Chapter 5, Building Blocks, demonstrate how the four principles of natural capitalism are revolutionizing the automotive and the building and real estate industries.

Many magazines and newspapers start off the new year with a list of predictions by experts in their fields. NATURAL CAPITALISM is not a book on predictions. The authors do not claim to have a crystal ball. The book is, in their own words, "a portrayal of opportunities that if captured will lead to no less than a transformation of commerce and of all societal institutions."

The trio of authors are consultants on energy and water efficiency to many of the world's leading companies and institutions. What better way to peer into future possibilities than to examine the industrial trends the authors are helping to initiate? These opportunities offer a glimmer of hope for the new millenium, and the multitude of resource-efficient practices and projects should be an inspiration for developing our New Year's resolutions.

The 416-page hardcover book NATURAL CAPITALISM: CREATING THE NEXT INDUSTRIAL REVOLUTION is available for $26.95 from Rocky Mountain Institute (www.rmi.org). It is also available online in its entirety at www.naturalcapitalism.org.

NEW HANDBOOK ASSISTS IN PREPARING ENERGY AND WATER ESTIMATES



Here's an Energy Manager's dilemma: OPNAVINST 4100.5, *Energy Management,* directs that all utility bills be based on metered data. What do you do when metering all utilities at all buildings is not possible?

DOD has this solution to offer. *Estimating Energy and Water Consumption for Shore Facilities and Cold Iron Support for Ships* (MIL-HDBK-1133), issued on 30 September 1999 by DOD, provides a simple, inexpensive, dependable approach to estimating energy and water consumption based on sound mathematical principles. The handbook, an update of NAVFAC MO-303, *Utilities Target Manual,* last printed in 1972, is based on a limited statistical sampling of metered data by building type.

The handbook is intended as a tool for appropriately estimating current and future energy and water consumption for buildings, ships, and other uses at Navy installations. It presents a suggested allocation methodology and provides calculation assistance in a straightforward, easy-to-apply manner. Data collection is kept to a minimum to ensure easy, time-effective application. The resulting energy and water estimates are considered as applicable as other nonmetering estimating methods requiring much more detailed data collection and calculation.

The methodology and assistance provided in the handbook are intended to be available for use where other systems are ineffective or outdated. The authors do not intend the manual to second-guess expected consumption when metered data exist. Nor do they intend it to replace an existing methodology that is effective and reasonably accurate. It is best applied base-wide rather than to select consumers. This handbook should be considered another tool in your arsenal to use when metered data and software modeling are not cost-effective or available.

Military Handbook 1133 is available in PDF format on the Navy Energy web site. Set your browser to http://energy.navy.mil/publications/milhdbk1133.pdf

SECNAV ENERGY AWARD WINNERS

NORFOLK NAVAL SHIPYARD BUILDS AWARD-WINNING ENERGY PROGRAM

Norfolk Naval Shipyard is the winner of the FY98 Secretary of the Navy Energy Award in the Industrial Category – receiving a monetary award of $35,000 and the privilege of flying the SECNAV energy flag for one year.

Norfolk Naval Shipyard (NNSY) reduced its energy consumption 2.1% per square foot in FY 1998.

NNSY implemented ten activity-funded projects totaling nearly $3 million, saving $1.4 million and 96,000 MBTU annually.

NNSY has a very active energy program with high level command interest. Senior management is continuously apprised of progress toward the Shipyard's goals. Awareness training is provided to all coordinators and monitors, and both telephone and e-mail hotlines are in place providing a 24-hour message center for energy issues. Incentive awards are given to employees who have made significant contributions to energy conservation or awareness.

All Building Energy Monitors (BEMs) developed Area Specific Checkpoint Lists in FY 1998; implementation of this program has started and is producing meaningful results.

By forming an energy conservation alliance with the Naval Meteorology and Oceanography Command, NNSY is using weather forecast data to develop the earliest possible date for securing steam heat, the latest possible date for reinitiating steam heat, and extremely accurate utility budget forecasts.

Norfolk Naval Shipyard conducted comprehensive electrical surveys of all buildings and established summer steam requirements to assist in the planning and methodical implementation of lighting and HVAC replacements and repairs. The Shipyard set up mechanisms making it easier for all base personnel to report problems and is strengthening the involvement of shop management in reporting and correcting deficiencies.

For more information, contact Michael Pyon at 757-396-8041.

Check it Out

What You'll Learn to Play When you Can no Longer Play Monopoly!

SUPPLYING ELECTRICITY IN A DEREGULATED ENVIRONMENT

Deregulation is rapidly restructuring the electric power industry, transforming a highly regulated business into an industry where the generation and wholesale power markets are highly competitive. According to the Edison Electric Institute, all 50 states and the District of Columbia are examining competition in the electric utility industry at the retail level. Pilot programs are underway in some states. About half of the states have adopted or endorsed retail competition. DON activities in California and Pennsylvania are already reaping savings from this deregulation frenzy.

Want to develop and refine skills bidding with electricity supplies? Then sign up to play the online Deregulation Simulation game of the Association of Energy Services Professionals. Set your browser to www.aesp.org Scroll down to the game board and **Click here** pick.

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Check it Out

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What You'll Learn to Play When you Can no Longer Play Monopoly!

SUPPLYING ELECTRICITY IN A DEREGULATED ENVIRONMENT

Once you've registered to be a utility team, you'll be given an unused capacity of 50 MW of electricity and asked to bid to supply electricity to customers. You will compete against other utilities who submit their bids, as well as a pure commodity broker who only offers price to these customers. You can also compete as a commodity only supplier if you think that strategy is the most profitable. Your goal is to maximize the net profit serving customers over three years of simulated competition.

The winner is the team with the highest cumulative customer net revenues at the end of three years of deregulation. You will be sent a report of how well you did on each competitive event after the bids close, plus a summary of your team's performance at the end of each simulated year of competition. The Association of Energy Services Professionals will announce the winner in their quarterly Strategies newsletter and the annual grand winner will receive recognition at the Annual Meeting.

Good luck. May the best team win!

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Watts News?

We want to hear from you.

Tell us about the energy initiatives you're working on, the problems you encounter, and the solutions you discover.

Submit article ideas, comments, or questions to:

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Be sure to include your name and commercial phone number.

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